

Date: October 23, 2006

State of Hawaii
Department of Land and Natural Resources
Division of State Parks
1151 Punchbowl Street, Room 310
Honolulu, Hawaii 96813

Attention: Mr. Steve Thompson

Subject: Earthquake Emergency Response Visit at King Kamehameha I Birthplace
Big Island, Hawaii

Dear Mr. Thompson:

On the afternoon of October 19, 2006, our senior geologist Dr. Yucheng Pan and I from Earth Tech, Inc. (Earth Tech) along with a staff of professionals from State Department of Land and Natural Resources (DLNR), Division of Parks, visited the birthplace for King Kamehameha I located in Kohala area on the most northern tip of the Island. See Photo No. 1. The purpose of this site visit was to investigate potential impact of the October 15 earthquake on the various rock structures within the birthplace monument.

A walk through the site indicated that the both the perimeter and the inner rock walls have received sporadic damage at various points. Rocks were separated from the wall and were fallen on the nearby ground. The prevailing damage seemed to have occurred along the outer wall at a number of locations. See Photo No. 2 through 9. The damage to the inner structure was also recorded. See Photo No. 10 and 11.

The repair of this culturally sensitive structure requires a special type of methodology and approach which is different from conventional construction. It would take a particular master builder carefully chosen from among the Hawaiian community. We anticipate the cost of repair at approximately \$75,000 and a period of construction of 1 month.

Prepared by:

A handwritten signature in black ink, appearing to read 'Ardalan R. Nikou', with a long horizontal flourish extending to the right.

Ardalan R. Nikou, PE, RME
Chief Engineer
Earth Tech, Inc.



Photo No. 1- King Kamehameha I Birthplace Monument.



Photo No. 2- Boulders dislodged from the wall structure.



Photo No. 3- Outer wall failure due to ground motion.



Photo No. 4- Wall failure along the inside of the perimeter wall.



Photo No. 5- Mass failure of rock wall structure.



Photo No. 6- Scattering of the rocks from the wall due to earthquake.



Photo No. 7- Fallen rocks from ground shaking.



Photo No. 8- Scattered fallen boulders.



Photo No 9- Wall failure from ground motion.



Photo No. 10- Wall failure along the inner and outer walls.



Photo No. 11- Loss of support caused rocks from both the inner and outer structures to fail.